

ADDRESS INQUIRY SYSTEM, COMPUTER SOFTWARE PRODUCT, AND  
ADDRESS INQUIRY METHOD

**Background of the Invention**

5      **1.    Field of the Invention**

          The present invention relates to an address  
inquiry system, a computer software product, and an  
address inquiry method, for example, used when one, who  
gets access to an old address of a changer who has  
10      changed his or her address and cannot communicate with  
the changer, inquires about a new address of the  
changer.

**2.    Description of the Related Art**

          When two persons or corporations who are away from  
15      each other communicate with each other bi-directionally  
or uni-directionally, the other party concerned in  
communication is generally specified by the use of some  
address. When this address is wrong, the communication  
with the aforesaid other party is impossible.

20      In some cases, however, the address of the other  
party is unknown because the other party has moved.  
Therefore, various means for disclosing a new address  
of a new location to an inquirer have been hitherto  
provided.

25      In the case of a telephone number, for example, it  
is possible to automatically inform one who got access  
to an old telephone number about a new telephone number

of a new location for a fixed period of time.

Even when the old telephone number is unknown, a paper telephone directory (the Yellow Page or White Page), commercially available package software thereof, and the like are given as means for searching someone's telephone number from his or her name and the like. If such means are used, anyone can know a new telephone number of a new location as far as the telephone number is registered.

Also regarding a mail address, an electronic mail address, (hereinafter defined as an e-mail address in this embodiment) a home page address (URL), and the like in addition to the telephone number, the similar listing service is provided, and a desired address can be known without any limitation as far as the address is registered in the list.

Incidentally, in the case of a mail address, mail is only forwarded to a registered new address without a post office disclosing the new address to a sender. Therefore, in this case, it is necessary for a receiver of the mail to inform the sender of the mail about the new address on another occasion.

According to the aforesaid conventional services, however, the following problems of various sorts which need to be solved exist.

(1) In most of conventional services, as described in Japanese Laid-open Patent No. 11-74931, a new

address of a changer is disclosed to an inquirer unconditionally or by the input of a password if the inquirer inquires about an old address of the changer and the said old address is registered. Namely, in  
5 such services, the new address can be reported or not be reported depending on a password and the like, but it is impossible to selectively inform the inquirers about the new address depending on individual inquirers.

(2) In the services like this, the changer side  
10 cannot know when or to whom the new address is disclosed.

(3) Conventionally, to notify a third party of change information about a URL of a home page, it is necessary to notify him or her of a URL (a new address)  
15 of a new home page on the old home page. Therefore, the domain name of the old home page and a contract with an Internet service provider needs to be maintained, which causes a problem that the cost thereof needs to be borne during the notification of change information.

(4) When change information about a telephone  
20 number or mail address is given, there is a limit in terms of a period to the present service of a telephone office or a post office.

(5) In the case of mail service, the receiver  
25 needs to inform a sender of mail delivered to the old address about the new address on another occasion by himself or herself as described above.

(6) Meanwhile, in transport by the majority of private companies, it is impracticable to make a forwarding request to all of transport companies, and moreover, some private companies do not accept such a request.

(7) Addresses sometimes cease to be used for some reason. Namely, the use of the addresses themselves is sometimes stopped without the telephone number being changed. In this case, since the conventional service handles only addresses of the same sort, some who know only the telephone number cannot know other addresses of the changer.

#### Summary of the Invention

An object of the present invention is to provide a new address inquiry system with a high degree of freedom in compliance with the wishes of a changer and an inquirer who inquires about a new address of the changer.

To solve the aforesaid problems, according to a first aspect of the present invention, an address inquiry system for informing an inquirer of a new address of a changer based on an old address of the changer via an Internet, comprising: a data base relationally storing at least the old address, the new address, and an address disclosing condition capable of setting a condition whereby the changer judges whether to give permission to disclose the new address; a means

for searching the new address and the address  
disclosing condition corresponding to the old address  
from the data base when the inquirer sends an inquiry  
including the old address; a means for making the  
5 changer confirm whether the new address is disclosed  
when the address disclosing condition in searching  
includes the set condition; and a means for informing  
the inquirer of the new address when the changer  
permits the disclosure of the new address is provided.

10           According to the present invention, it is possible  
to make the changer judge whether to give permission to  
disclose the new address, which makes it possible to  
inform only inquirers desired by the changer about the  
new address of the changer.

15           According to a second aspect of the present  
invention, a system for making an inquiry about an  
address, comprising: an address data base, in which a  
registrant registers his or her own address,  
relationally storing an address disclosing condition  
20 for an inquirer who wishes to know the address of the  
registrant; a disclosure judging means for judging  
whether to disclose the address to the inquirer based  
on the address disclosing condition when the inquirer  
makes an inquiry about the address of the registrant;  
25 and an address disclosing means for disclosing the  
address of the registrant to the inquirer if the  
disclosure judging means judges that the address is

disclosed is provided.

According to the present invention, various responses can be given to the inquiry about the address from the inquirer in accordance with the address disclosing condition set by the registrant (for example, a changer who changed his or her old address to a new address) which registered his or her own address. For example, depending on inquirers, various sorts of settings, for example, refusal of an inquiry from the said inquirer, unconditional disclosure of the address, confirmation by the registrant, and the like can be made, and moreover they can be automatically executed.

According to a third aspect of the present invention, a computer software product for instructing a computer system to inquire of a system for making an inquiry about an address, about an address, comprising: a storage medium; and an inquiry instructing means, stored in the storage medium and started based on the return of an e-mail because its destination is unknown, for instructing the computer system to inquire of the system for making the inquiry about the address, about an e-mail address of an addressee of the e-mail is provided.

According to the present invention, the inquiry instructing means is started based on the receipt of a notice of non-delivery of the e-mail by e-mail software installed in the computer, for example, which makes it

possible to inquire of the system according to the first or the second aspect about the address by using the e-mail address related to the non-delivery.

According to a fourth aspect of the present invention, a computer software product for instructing a computer system to inquire of a system for making an inquiry about an address, about an address, comprising: a storage medium; and an inquiry instructing means, stored in the storage medium and started based on the impossibility of display of a home page because its destination is unknown, for instructing the computer system to inquire of the system for making the inquiry about the address, about an address of the home page is provided.

According to the present invention, the inquiry instructing means is started based on the receipt of a notice of the refusal of a request for display of a URL by a browser installed in the computer, for example, which makes it possible to inquire of the system according to the first or the second aspect about the address by using an old URL related to the impossibility of display.

According to a fifth aspect of the present invention, a method for inquiring about an address of a registrant, comprising: an inquiry receiving step of receiving an inquiry about the address of the registrant from an inquirer; a registration judging

step of judging whether the registrant is registered in  
an address data base; a disclosure judging step of  
judging whether the address is disclosed to the  
inquirer based on a predetermined disclosing condition  
5 when the registrant is registered in the address data  
base; and an address disclosing step of disclosing the  
address of the registrant to the inquirer if it is  
judged that the address is disclosed in the disclosure  
judging step is provided.

10 According to aforesaid configuration, the system  
according to the first or the second aspect can be  
executed.

These objects and still other objects and  
advantages of the present invention will become  
15 apparent upon reading the following specification when  
taken in conjunction with the accompanying drawings.

#### **Brief Description of the Drawings**

FIG. 1 is a schematic diagram showing the entire  
configuration of an embodiment of the present  
20 invention;

FIG. 2 is a block diagram showing the  
configuration of a changer database;

FIG. 3 is a block diagram showing the  
configuration of an inquirer data base;

25 FIG. 4 is a schematic block diagram showing an  
address inquiry system;

FIG. 5 is a flowchart showing the registration



process of changer information;

FIG. 6 shows an example of an interface screen for explaining the registration of the changer information;

FIG. 7 shows an example of the interface screen  
5 for explaining the registration of the changer information;

FIG. 8 shows an example of the interface screen for explaining the registration of the changer information;

10 FIG. 9 shows an example of the interface screen for explaining the registration of the changer information;

Fig. 10 shows an example of the interface screen for explaining the registration of the changer  
15 information;

FIG. 11 is a first flowchart showing the process of registration of inquirer information and inquiry about a new address;

FIG. 12 shows an example of an interface screen  
20 for explaining the registration of inquirer information;

FIG. 13 shows an example of the interface screen for explaining the registration of the inquirer information;

25 FIG. 14 shows an example of the interface screen for explaining the registration of the inquirer information;

FIG. 15 shows an example of the interface screen for explaining the registration of the inquirer information;

5 FIG. 16 is a block diagram showing the configuration of an inquirer terminal in which special-purpose software for inquiry is installed;

FIG. 17 is a second flowchart showing registration of inquirer information and the process of inquiry about the new address;

10 FIG. 18 shows an example of an interface screen for explaining the inquiry process in which the special-purpose software for inquiry is used;

15 FIG. 19 shows an example of the interface screen for explaining the inquiry process in which the special-purpose software for inquiry is used;

FIG. 20 shows an example of the interface screen for explaining the inquiry process in which the special-purpose software for inquiry is used;

20 FIG. 21 shows an example of the interface screen for explaining the inquiry process in which the special-purpose software for inquiry is used;

FIG. 22 is a third flowchart showing the process of registration of inquirer information and inquiry about the new address;

25 FIG. 23 shows an example of an interface screen for explaining an inquiry operation by an address inquiry system;

FIG. 24 shows an example of the interface screen for explaining the inquiry operation by the address inquiry system;

5 FIG. 25 shows an example of the interface screen for explaining the inquiry operation by the address inquiry system;

FIG. 26 shows an example of the interface screen for explaining the inquiry operation by the address inquiry system;

10 FIG. 27 shows an example of the interface screen for explaining the inquiry operation by the address inquiry system;

15 FIG. 28 shows an example of the interface screen for explaining the inquiry operation by the address inquiry system;

FIG. 29 shows an example of the interface screen for explaining the inquiry operation by the address inquiry system;

20 FIG. 30 shows an example of an interface screen for explaining another embodiment of the present invention;

FIG. 31 shows an example of the interface screen for explaining the inquiry operation by the address inquiry system; and

25 FIG. 32 shows an example of the interface screen for explaining the inquiry operation by the address inquiry system.

**Detailed Description of the Preferred Embodiment**

A Preferred embodiment of the present invention will be explained below with reference to the drawings.

As shown in FIG. 1, an address inquiry system 1  
5 according to this one embodiment is connected to an Internet 2 and structured to be able to bi-directionally communicate with a terminal (a changer terminal 4) of a changer 3 and a terminal (an inquirer terminal 6) of an inquirer 5.

10 The changer 3 is defined here as an individual or a corporation (hereinafter defined as an individual in this embodiment) who has moved, for some reason, from an old address to a new address, has changed his or her own address from the old address to the new address, or  
15 has stopped the use of the old address. The inquirer 5 is defined here as an individual or a corporation (hereinafter defined as an individual in this embodiment) which inquires about the new address of the changer 3 since an access by the old address of the  
20 changer 3 is refused in transmitting e-mail, requesting data, and the like to the old address.

Further, an address is defined here as information for specifying a position of his or her own in communication by the use of existing communication  
25 means, and an e-mail address, an IP address, a URL, a telephone number, a mail address, and the like are given as its examples. When these addresses are

unknown or incorrect, it is impossible to communicate with the other party through the use of their corresponding communication systems.

5 An object of the present is to provide the address inquiry system 1 capable of flexibly coping with an intention of the changer 3 when the inquirer 5 inquires about the new address based on the old address of the changer 3.

10 Elements of this embodiment will be explained below in detail.

15 This address inquiry system 1 is mainly composed of a changer data base 10 storing information about the changer 3, an inquirer data base 11 storing information about the inquirer 5 who inquires about the new address, and an information processing unit 12 processing the inquiry from the inquirer 5 based on the information stored in these data bases 10 and 11.

These elements will be explained below.

(Changer data base)

20 As shown in FIG. 2, the changer data base 10 stores a changer authenticating information 14 including a changer ID 21 and a changer password 22 for specifying the changer 3, change information 15 including one, or two or more old addresses 23 and a new address 24, a changer attribute information 16  
25 storing the property of the changer 3, a changer profile information 33 for characterizing the changer 3,

an address disclosing condition 17 storing responses depending on the inquirers 5, an inquiry refusal list 18 storing a list of the inquirers 5 who are refused an inquiry, a confirmation form format 19 which is sent to  
5 the changer 3 to confirm whether the new address 24 is disclosed or not, and a changer reference address 20 (an e-mail address) provisionally assigned to the changer 3.

10 The changer authenticating information 14 such as the changer ID 21 and the changer password 22 is information required for security when information is registered or changed in the changer data base 10 and issued to the changer 3 who has registered the new address 24 and the like in the address inquiry system 1.

15 The change information 15 is composed of a disclosure rule 25 in addition to the old address 23 and the new address 24 described above. The sorts of addresses which can be registered in this embodiment are four sorts such as an e-mail address, a home page  
20 URL, a telephone number, and an address, and the changer 3 is requested to register the old address 23 and the new address 24 concerning at least one or more sorts out of the aforesaid sorts. In this embodiment, after the old address 23 and the new address 24, codes  
25 26 and 27 denoting the sorts of these addresses are given (FIG. 2). Incidentally, two or more old addresses 23 or new addresses 24 may be registered per

one sort.

Moreover, by setting the disclosure rule 25, the changer 3 can freely set the sort of the new address 24 to be disclosed when receiving an inquiry with the presentation of each old address 23. Namely, when any of the aforesaid four sorts of old addresses 23 is presented, the new address 24 different from the presented old address 23 in sort can be disclosed or a plurality of new addresses 24 can be disclosed. For example, such setting that a new e-mail address is disclosed when an inquiry with the presentation of an old telephone number is received, or a new e-mail address and a new home page URL are disclosed when an inquiry with the presentation of an old mail address is received can be performed.

The changer attribute information 16 is one in which the changer 3 previously registers information other than the old address 23 such as a name and an address capable of distinguishing and specifying the changer 3 himself or herself. The changer profile information 33 is one in which the changer 3 previously registers a profile other than the changer attribute information 16 such as a self-introduction capable of characterizing the changer 3. For example, in many cases, an e-mail address is composed by a combination of alphabets, numbers and symbols, and the like, and the owner thereof cannot be specified by this e-mail

address only. Therefore, the changer attribute  
information 16 and the changer profile information 33  
are useful information for confirming whether the owner  
of the address is the changer 3 of whom the inquirer 5  
5 wishes to inquire.

Response patterns (the numerals 28 to 30 in FIG.  
2) of this address inquiry system 1 in the case where  
an inquiry with the presentation of the old address 23  
is received from the inquirer 5 are previously  
10 registered in the address disclosing condition 17. In  
this embodiment, the changer 3 can set a response by  
selecting one from the following three sorts of  
responses (1) to (3).

(1) "Disclose a new address instantly." (the  
15 numeral 28 in FIG. 2)

This response pattern means that the new address  
24 is disclosed to the specific inquirer 5 or the  
inquirer 5 which fulfills a fixed condition without  
making the changer 3 confirm whether the new address 24  
20 is disclosed or not. In this embodiment, the new  
address 24 is disclosed to all the inquirers 5  
unconditionally by the selection of this item.  
Incidentally, it is suitable that a new address  
disclosure list is prepared and that the new address 4  
25 is disclosed only to the inquirers 5 included in this  
list without the confirmation of the changer 3.

(2) "Make the changer 3 judge whether to disclose



a new address by transmitting information about the inquirer 5 without disclosing the new address instantly." (the numeral 29 in FIG. 2)

5 This response pattern means that when the inquirer 5 which inquires about an address fulfills or does not fulfill a specific condition, the information of this inquirer 5 is transmitted to the changer 3 for confirmation. In this case, the changer 5 can judge whether to give permission to disclose the new address 10 24 after confirming who the inquirer 5 is, for what purpose the inquirer 5 requests the disclosure of the new address 24, and the like from the information about the inquirer 5.

15 (3) "Refuse an inquiry about a new address instantly." (the numeral 30 in FIG. 2)

This response pattern means that when the inquirer 5 which is going to inquire about an address fulfills or does not fulfill a specific condition, the inquiry about the address is automatically refused. 20 Incidentally, in this embodiment, when this item is selected, inquiries from all the inquirers 5 are refused unconditionally.

25 Meanwhile, in this embodiment, by registering the inquirers 5, inquiries from whom the changer 3 wishes to refuse, in the inquiry refusal list 18, setting such that inquiries from the inquires 5 registered in this inquiry refusal list 18 are refused even when the

pattern (1) or the pattern (2) is selected is possible.

It is possible to previously register the other parties, inquiries from whom the changer 3 wishes to refuse, in the inquiry refusal list 18. In this embodiment, however, also when the response of "Do not disclose new address, and refuse inquiry from this inquirer hereafter" (See the hyperlink 112 in FIG. 23) is selected when the changer 3 makes a judgment in the pattern (2), an e-mail address of this inquirer 5 is automatically registered in the inquiry refusal list 18.

In this embodiment, the respective responses of the patterns (1) to (3) can be set in each of the registered old addresses 23. For example, it is possible that when an inquiry about the new address 24 with the presentation of an old home page URL is received, "Disclose a new address instantly" (the pattern (1)) is selected, and that when an inquiry with the presentation of an old telephone number is received, the response of "Make a changer judge whether to disclose a new address by transmitting information about an inquirer without disclosing the new address instantly." (the pattern (2)) is sent through the address inquiry system 1.

Meanwhile, in the confirmation form format 19, the format of the confirmation form for the permission of disclosure sent from the address inquiry system 1 to the changer 3 can be set in the case of the response

pattern (2). Namely, in this embodiment, as will be explained later, the inquirer 5 first makes out an inquiry message for the address inquiry system 1, and the address inquiry system 1 draws up the confirmation form for the changer 3 based on this inquiry message. It is possible to include an important matter (a message text and the like) from the inquirer 5 in this confirmation form. In the confirmation form format 19, "with message text" 31 or "without message text" 32, which means that a message text included in an inquiry message from the inquirer 5 is included or not included in the confirmation form for the changer 3, can be selected.

As will be explained later, even if the "without message text" 32 is set in the confirmation form format 19, the changer 3 can obtain the message text from the inquirer 5 by e-mail later.

The changer reference address 20 is an e-mail address issued by the address inquiry system 1 to exchange communications including the confirmation form with the changer 3, and issued when the changer 3 has no e-mail address or does not want to use its own e-mail address even if he or she has the address, or issued for ensuring security.

(Inquirer data base)

Meanwhile, as shown in FIG. 3, the inquirer data base 11 stores an inquirer authenticating information

35 composed of an inquirer ID 41 and an inquirer  
password 42 for authenticating the inquirer 5, an  
inquiry log 36, an inquirer attribute information 37,  
an inquirer profile information 38, an inquirer  
5 reference address 39, and the like.

The inquirer authenticating information 35 such as  
the inquirer ID 41 and the inquirer password 42 is  
necessary information in terms of security when a  
demand for the search for the new address 24 from the  
10 inquirer 5 is executed and its result is confirmed.

The inquiry log 36 is information for monitoring  
an inquiry process by the inquirer 5, and for example,  
utilized for confirming whether a response from the  
changer 3 to the confirmation is within a predetermined  
15 period.

The inquirer attribute information 37 is  
information about the inquirer 5 presented to the  
changer 3 for making the changer 3 confirm whether the  
new address 24 is disclosed to the inquirer 5. In this  
20 embodiment, this inquirer attribute information 37 is  
composed of a name, an address (an e-mail address, a  
telephone number) and the like of the inquirer 5.

The inquirer profile information 38 is a brief  
composition of introduction for characterizing the  
25 inquirer 5 and registered to characterize the inquirer  
5 in making the changer 3 confirm whether to disclose  
the new address 24. The registration of the inquirer

profile information 38 is left to the discretion of the inquirer 5, but it is desirable to persuade the inquirer 5 to register it as much as possible since there is a case where the changer 3 refuses the disclosure of the new address 24 since the inquirer 5 is not identified only by an e-mail address and the like.

The inquirer reference address 39 is an e-mail address issued by the address inquiry system 1 to exchange communications including the inquiry message with the inquirer 5, and issued when the inquirer 5 has no e-mail address or does not want to use its own e-mail address even if he or she has the address, or issued for ensuring security.

(Information processing unit)

Next, the information processing unit 12 will be explained.

FIG. 4 is a diagram showing the entire configuration of the address inquiry system 1 including this information processing unit 12. The information processing unit 12, the changer data base 10, and the inquirer data base 11 are connected to a bus 59 to which a CPU 55, a RAM 56, a ROM 56, and communication interfaces 58 of various kinds are connected.

As shown in FIG. 4, the information processing unit 12 of the address inquiry system 1 is composed of a changer authenticator 45 authenticating the changer 3,

a changer register 46 receiving the change information  
15 such as the new address 24 inputted by the changer 3  
and storing it in the changer data base 10, an inquirer  
authenticator 47 authenticating the inquirer 5, an  
5 inquirer register 48 registering information about the  
inquirer 5 in the inquirer data base 11, a changer  
searcher 49 searching the changer data base 10 with the  
old address 23 of the changer 3 when the inquirer 5  
inquires about the new address 24 of the changer 3, a  
10 changer selector 50 making the inquirer 5 select from  
the changers 3 on whom the inquiry about the new  
address 24 is executed when there exist plural changers  
3 who fulfill the condition in the search, a new  
address disclosure judge 51 judging whether to disclose  
15 the new address 24 to the inquirer 5 based on the  
address disclosing condition 17 for the new address 24  
of the changer 3, a changer confirmer 52 making the  
changer 3 confirm whether the new address 24 is  
disclosed or not, an inquiry process monitor 53  
20 administering the period of each inquiry process, and a  
discloser 54 disclosing an inquiry result to the  
inquirer 5.

These elements 45 to 54, the changer data base 10,  
and the inquirer data base 11 are practically composed  
25 of computer programs installed in a storage medium of a  
computer system as shown in FIG. 4 and show various  
functions of the present invention by being read and

executed in the RAM 56 by means of the CPU 55.

The detailed configurations and functions of the elements (45 to 54) will be explained below with reference to flowcharts and interface examples.

5 (Registration by changer)

FIG. 5 is a flowchart showing the registration process of changer information by the changer register 46 and the like.

10 The changer register 46 first judges whether the changer 3 concerned in an access has already registered changer information or not by inquiring of the changer data base 10 about it (step S1). When the changer information is registered for the first time, the changer register 46 receives the information, registers  
15 it in the changer data base 10 (step S2), and thereafter issues the changer ID 21 and the changer password 22 to the changer 3 (step S3).

Meanwhile, when the changer 3 wishes to changes information which has been already registered, the  
20 changer authenticator 45 authenticates an access through the use of the changer ID 21 and the changer password 22 by making inquiries at the changer data base 10 (step S4), and thus a change and a renewal of information in the changer data base 10 are permitted  
25 (step S5).

FIG. 6 to FIG. 10 show examples of an interface screen when changer information (See FIG. 2) in the

changer data base 10 is registered. Although a series of registration processes are executed in connection with a Web site offered by the address inquiry system 1 in this example, registration may be performed by transmitting and receiving necessary information to/from the address inquiry system 1 by e-mail.

FIG. 6 is an example of an interface screen for registering the changer attribute information 16. The changer 3 inputs basic information such as a name 60, a present address 61, a telephone number 62, a FAX number 63, on this screen. The changer register 46 registers this information as the changer attribute information 16 (See FIG. 2). If the changer 3 wishes, the changer reference address 20 for receiving notice from the address inquiry system 1 is set and acquired through this screen. Incidentally, in registering basic information about the changer 3, individual registration or corporate registration can be selected, and an example of the individual registration is shown here.

When the registration of the basic information is completed, the changer register 46 displays an interface screen shown in FIG. 7. This screen is an interface for registering the old address 23 and the new address 24 to be disclosed based on the old address 23 from the change information 15, and FIG. 7 shows an example of a screen for an e-mail address.



The changer 3 registers an address before change (the old address 23) necessary for receiving an inquiry and an address after change (the new address 24) which is disclosed when there is an inquiry on this screen.

5 In this embodiment, a plurality of (three in this embodiment) old addresses 23 can be registered and renewed at any time by the aforesaid process. When the new address 24 to be disclosed is the same as that in the basic information (the changer attribute  
10 information 16) registered in the interface in FIG. 6, a button of "Same as basic information" 67 is pressed, whereby the basic information is transferred and repeated input can be avoided.

The changer register 46 also accepts the changer  
15 profile information 33 in an input section shown by the numeral 68 in this screen. This changer profile information 33 is information given to the inquirer 5 to confirm and specify the other party (the changer 3) about whose address the inquirer 5 wishes to inquire as  
20 described above.

Subsequently, the changer register 46 displays an interface screen shown in FIG. 8. This interface screen is to register and set the address disclosing condition 17, the disclosure rule 25, and the  
25 confirmation form format 19 from the information in the changer data base 10 shown in FIG. 2.

Namely, on this screen, the changer 3 registers

the sort of the new address 24 to be disclosed to the inquirer 5 out of the registered new addresses 24 such as a new e-mail address and a new address, a condition of disclosure (including unconditional disclosure and unconditional non-disclosure) in the case where an inquiry is sent from the inquirer 5. The example in FIG. 8 shows the setting of the address disclosing condition 17, the disclosure rule 25, and the like when an inquiry with the presentation of an e-mail address as the old address 23 is sent.

In this example, "Make changer judge whether to disclose address to inquirer after acquisition of inquiry information (information about the inquirer 5)." (the pattern (2) shown by the numeral 29 in FIG. 2) is registered as the address disclosing condition 17, "New e-mail address" is registered as the sort of the new address 24 to be disclosed based on the e-mail address (the disclosure rule 25), and "Exclude message text (from the inquirer 5) from inquiry information (information about the inquirer 5)" is registered as the confirmation form format 19. The above information is registered in the changer data base 10 by the changer register 46.

Meanwhile, FIG. 9 is an example of a registration screen of the inquiry refusal list 18 (See FIG. 2).

On this screen, the changer 3 inputs conditions such as e-mail addresses of the inquirers from whom the

changer 3 wishes to refuse inquiries. By pressing a  
"Registration" button 69 on this screen, these  
addresses are registered in the inquiry refusal list 18,  
and stored in the changer data base 10. Incidentally,  
5 this inquiry refusal list 18 can be renewed (added,  
deleted) at any time by the aforesaid process.

When the changer 3 finishes inputting changer  
information on each of the above screens, the changer  
register 46 displays a confirmation screen such as  
10 shown in FIG. 10. Incidentally, in order to confirm  
that the e-mail address registered by the changer 3 is  
owned by the changer himself or herself, it is suitable  
that the issued changer ID 21 is not displayed on this  
screen and that an e-mail notifying the completion of  
15 changer registration is separately transmitted from the  
address inquiry system 1 to the changer 3 to notify the  
changer ID 21 by this e-mail. Moreover, an e-mail in  
which the same contents are described may be  
transmitted to the changer 3 without displaying this  
20 confirmation screen (FIG. 10).

(Registration by inquirer)

Next, the registration of inquirer information by  
the inquirer register 48 will be explained with  
reference to a flowchart shown in FIG. 11 and examples  
25 of an interface screen shown in FIG. 12 to FIG. 15.  
This registration of inquirer information is executed  
as a part of the process of an inquiry about the new

address 24 from the inquirer 5.

Namely, the inquiry from this inquirer 5 is executed when the inquirer 5 cannot get access to the changer 3 when he or she sends an e-mail to the old address 23 without knowing the change thereof or tries to refer to a home page by an old URL address without knowing the change thereof.

The inquirer register 48 first judges whether an inquiry from the said inquirer 5 is his or her initial inquiry by inquiring of the inquirer data base 11 about it (step S6). When the inquirer 5 uses the address inquiry system 1 for the first time, that is, when the inquirer 5 inquires about an address for the first time, the inquirer register 48 accepts the registration of this inquirer 5 (step S7).

FIG. 12 and FIG 13 are examples of screens for accepting the registration of information about the inquirer 5.

FIG. 12 is an example of a screen in which the inquirer register 48 accepts the registration of attribute information of the inquirer 5, and the inquirer 5 registers basic information such as a name 70, an address 71, a telephone number 72, a FAX number 73 and sets and acquires the inquirer reference address 39 for receiving an inquiry result if he or she wishes. Incidentally, in registering the basic information about the inquirer 5, individual registration or

corporate registration can be selected, and an example of the individual registration is shown here. The information inputted on this screen is registered as the inquirer attribute information 37 and the inquirer reference address 39 in the inquirer data base 11 (See FIG. 3).

Then, the changer selector 50 performs setting on receipt of a response to a search result on a screen shown in FIG. 13. Specifically, when the matching changers 3 are searched as a result of the search of the change information, it is selected that the inquiry is immediately made for (all) the matching changers 3 (a pattern shown by the numeral 76 in FIG. 13), that an inquiry is made after the selection of the changer 3 when a plurality of matching changers 3 are searched (a pattern shown by the numeral 77 in FIG. 13), or that the inquiry is made after a memo, a profile, or the like which characterizes the changer 3 is confirmed (a pattern shown by the numeral 78 in FIG. 13).

Thereafter, the inquirer register 48 displays a screen shown in FIG. 14 for the inquirer 5 which has acquired the inquirer reference address 39 on the registration screen of inquirer information in FIG. 12, and notifies him or her of account information.

After the completion of the aforesaid registration operations, the inquirer register 48 displays a screen of the completion of inquirer registration shown in FIG.

15. This screen shows a list of information contents inputted or selected by the inquirer 5 in order that the inquirer 5 confirms registration contents. Incidentally, an e-mail in which the same contents are described may be sent to the inquirer 5.

Thereafter, the address inquiry system 1 makes the inquirer 5 judge whether to download special-purpose software for assisting the inquiry about the address (step S8-1). When this special-purpose software is downloaded, the download and set-up thereof is executed in step S8-2.

Namely, after this special-purpose software is downloaded in the computer system of the inquirer 5, an installer is automatically started, and this software is installed in the inquirer terminal 6 at the request of the inquirer 5 (step S8-2). This special-purpose software is automatically started by recognizing that e-mail is returned because its destination is unknown or that a URL address is not found as will be explained later (step S9), and has a function of assisting an access to the address inquiry system 1 and the search for the new address 24.

Even if the inquirer 5 is not a person who sends an inquiry to the address inquiry system 1 for the first time (No in step S6), the special-purpose software is downloaded when it has not been downloaded yet (step S10). When the special software is not

downloaded in the aforesaid step S8-1, subsequent processes are executed on Web page provided by the address inquiry system 1 (step S8-3). The inquiry process on this Web page is almost the same as the under-mentioned inquiry process by the use of the special-purpose software, and thus the explanation thereof is omitted.

(Inquiry by inquirer)

Next, the process of an inquiry about the new address 24 by the use of the special-purpose software will be explained.

FIG. 16 is a schematic block diagram showing the inquirer terminal 6 in which the special-purpose software is installed in a storage medium such as a hard disk. FIG. 16 shows the configuration of only a software program related to the present invention, and the illustration of hardware such as a CPU and basic software such as an OS is omitted.

In the inquirer terminal 6 in which this software is installed, a browser 80 for browsing an Internet home page and a mailer 81 for transmitting and receiving e-mail are set up in advance. The aforesaid software has e-mail account setter 82 setting e-mail account of the inquirer reference address 39 in the mailer 81, a starter 83 starting this software based on the receipt of a notice that an address is unknown by the browser 80 and the mailer 81, an inquiry message

maker 84 making out an inquiry message for the address  
inquiry system 1 based on information from the browser  
80 and the mailer 81, an inquiry executor 85 logging in  
the address inquiry system 1 and registering the  
5 inquiry message, and a new location displayer 86  
displaying a new location (for example, a home page)  
based on the acquisition of the new address 24 of the  
new location as the result of the inquiry.

The starter 83 and the inquiry message maker 84  
10 operate based on starting conditions stored in a  
starting condition storage shown by the numeral 87 in  
FIG. 16. Namely, in the starting condition storage 87,  
starting conditions such that the browser 80 and the  
mailer 81 automatically starts this software based on  
15 the receipt of a notice that an access with  
presentation of the old address 23 is refused are  
stored depending on the sort of the browser 80 and the  
mailer 81 as described above.

Moreover, this software has an inquirer  
20 authenticating information storage 88 storing the  
inquirer authenticating information 35. The inquiry  
message maker 84 automatically takes in the inquirer  
authenticating information 35 from this inquirer  
authenticating information storage 88, and the inquiry  
25 executor 85 logs in the address inquiry system 1 by  
using the inquirer authenticating information 35.

The inquiry process of the new address 24 will be



explained below by means of flowcharts in FIG. 17 and FIG. 22 and interface screen examples in FIG. 18 and the following figures.

When the aforesaid special-purpose software is  
5 used, the starter 83 starts the inquiry message maker  
84 based on the receipt of an e-mail of a non-delivery  
notice, in which a message that a destination is  
unknown is described, by the mailer 81 (steps S11-1 and  
S11-2 in FIG. 17). Incidentally, manual starting is  
10 also possible by changing starting conditions stored in  
the starting condition storage 87.

FIG. 18 is a conceptual diagram showing operations  
at the time of the starting of inquiry software. The  
inquiry message maker 84 has functions of displaying an  
15 input screen for an inquiry message such as shown by  
the numeral 90 in FIG. 18 in the inquirer terminal 6  
and transferring a sender 93, a destination 94, a  
subject 95, a message text 96, and the like out of the  
contents of original e-mail 92 attached to the non-  
20 delivery notice e-mail to the input screen in response  
to the click of a "Incorporate e-mail information"  
button 91 on this screen (step S12). It is possible to  
directly amend the inputted matters on this screen 90  
when the inquirer 5 wants to supplement the information.  
25 Thus, the inquiry message to be sent to the address  
inquiry system 1 is made out.

If the making of the inquiry message is completed,

the inquiry executor 85 is started by pressing a  
"Search change information" button 97 on the screen 90,  
and gets access to the address inquiry system 1, and  
logs in the system 1 using the inquirer authenticating  
5 information 35. Authentication on this occasion is  
executed by the inquirer authenticator 47 (See FIG. 4)  
of the system.

When the authentication by the inquirer  
authenticator 47 is completed, the destination 94, that  
10 is, the old address 23 of the changer 3 out of the  
inquiry information is sent to the changer searcher 49.  
The changer searcher 49 searches the changer data base  
10 by means of the received old address 23 (step S14).  
FIG. 19 to FIG. 21 show examples of interface screens  
15 for showing search results by the changer searcher 49  
on the inquirer terminal 6.

FIG. 19 shows an example of a screen of a Web page  
for informing the inquirer 5 that as the result of a  
search of the changer data base 10 in the address  
20 inquiry system 1 for the old address 23 of the changer  
3, the said address is not found (step S15). In this  
case, the inquiry about the corresponding new address  
24 comes to an end at this stage (step S16).

Meanwhile, FIG. 20 shows an example of a screen of  
25 a Web page for informing the inquirer 5 that only one  
matching address is found as the result of the search  
of the change information 15. The changer searcher 49

displays the changer profile information 33 together with the old address 23 of the changer 3, whereby the inquirer 5 can judge whether the owner of this old address 23 is the changer 3 about whose new address 24 the inquirer 5 wishes to inquire. When he wishes an inquiry, a "Start inquiry" button 100 is pressed (steps S17 and S19).

FIG. 21 shows an example of a screen of a Web page of the address inquiry system 1 informing the inquirer 5 that a plurality of matching addresses are found as the result of the search of the change information 15. In this case, the inquirer 5 can select the changer 3 about whose new address 24 the inquirer 5 wishes to inquire with reference to the changer profile information 33 (the changer attribute information 16) of the changer 3. By pressing a "Start inquiry" button 103 after the selection of the changer 3 by the use of check boxes 101 and 102, an inquiry about the new address 24 of the changer 3 can be started (step S17 to S19).

Incidentally, the communication between the changer 3 and the inquirer 5, and the address inquiry system 1 can be performed by e-mail, in which case it is possible to use the changer reference address 20 and the inquirer reference address 39 which are assigned by the address inquiry system 1.

Based on the press of the "Start inquiry" buttons

100 and 103 by the inquirer 5, the new address disclosure judge 51 takes the address disclosing condition 17 out of the changer data base 10 and confirms which pattern out of the numerals 28 to 30

5 shown in FIG. 2 the address disclosing condition 17 of the changer 3 imposed on the inquiry about the new address 24 is (step S20 in FIG. 22).

When the address disclosing condition 17 is "Disclose new address instantly" (the numeral 28 in  
10 FIG. 2), the inquiry refusal list 18 is then checked in this embodiment, and only when the inquirers 5 are not registered in the inquiry refusal list 18, the new address 24 is disclosed unconditionally to all the inquirers 5 (steps S21, S22-1, and S22-2). In this  
15 case, the address disclosure judge 51 and the discloser 54 in the address inquiry system 1 display a screen shown in FIG. 26 in the inquirer terminal 6 and disclose the new address 24 of the changer 3 to the inquirer 5. In this example, only an e-mail address is  
20 disclosed as the new address 24, but other sorts of new addresses 24, that is, a URL address, an address, a telephone number, and the like can be displayed according to the disclosure rule 25.

When the address disclosing condition 17  
25 registered by the changer 3 is "Make changer judge whether to disclose new address without disclosing new address instantly" (the numeral 29 in FIG. 2), the

inquiry refusal list 18 is then checked in this embodiment, and only when the inquirer 5 is not registered in the inquiry refusal list 18, the process advances to the next step (steps S23 and S24).

5           FIG. 27 shows an example of a notice screen in the inquirer terminal 6 by the new address disclosure judge 51 and the discloser 54 when the inquirer 5 is not registered in the inquiry refusal list 18. This example shows a notice of the inquiry result when the plural changers 3 (a changer A and a changer B) are  
10           selected on the screen shown in FIG. 21, and the new address 24 regarding the changer A is disclosed by the pattern shown by the numeral 28 in FIG. 2. Meanwhile, regarding the changer B, the inquirer 5 is informed  
15           that the changer 3 judges whether to disclose the new address 24 according to the pattern shown by the numeral 29 in FIG. 2.

          Incidentally, even when this pattern is selected, if the inquirer 5 is registered in the inquiry refusal  
20           list 18, his or her inquiry is refused (step S25). In this case, the screen shown in FIG. 25 is displayed in the inquirer terminal 6.

          Further, when the address disclosing condition 17 registered by the changer 3 is "Refuse inquiry about  
25           new address instantly" (the numeral 30 in Fig. 2), inquiries from all the inquirers 5 are refused unconditionally in this embodiment (steps S26 and S25).

Also in this case, the same screen shown in FIG. 25 is displayed in the inquirer terminal 6.

Next, the process of the confirmation of the changer 3 in step S27 and the following steps will be explained.

In this case, the new address disclosure judge 51 sends an e-mail of a confirmation form 105 with contents shown in FIG. 23 to the changer 3 to confirm whether the new address 24 is disclosed or not (step S27 in FIG. 22). In the confirmation form 105, a notice 106 that an inquiry about the new address 24 is sent, a date and time of the inquiry 107, an address 108 of the inquirer 5, a profile 109 of the inquirer 5, and a subject 110 are displayed. When "without message text" (the pattern shown by 32 in FIG. 2) is set in the confirmation form format 19, the message text in the inquiry message 90 shown in Fig. 18 received from the inquirer 5 is not displayed as described above. However, by selecting a link 111 for obtaining and displaying the message text, an e-mail in which the message text is described can be received (step S28).

Meanwhile, in the confirmation form 105, as shown in FIG. 23, the changer 3 who receives it can select a response to this inquiry among hyperlinks shown by the numeral 112 to 114 in FIG. 23, that is, in this embodiment, can select a response from "Do not disclose new address, and refuse inquiry from this inquirer

hereafter'' (the hyperlink shown by the numeral 112 in FIG. 23), ''Disclose new address'' (the hyperlink shown by the numeral 113 in FIG. 23), or ''Do not disclose new address this time, but receive inquiries from this inquirer hereafter'' (the hyperlink shown by the numeral 114 in FIG. 23).

FIG. 31 is an example of a notice to the inquirer 5 when ''Do not disclose new address, and refuse inquiry from this inquirer hereafter'' (the hyperlink shown by the numeral 112 in FIG. 23) is selected. In this case, the inquirer 5 is registered to the inquiry refusal list 18, and hereafter inquiries from the said inquirer 5 are automatically refused until the changer 3 changes the setting (steps S30 and S31).

FIG. 32 is an example of a notice to the inquirer 5 when ''Disclose new address'' (the hyperlink shown by the numeral 113 in FIG. 23) is selected (step S32). Via this screen, the inquirer 5 can know the new address 24 of the changer 3 and get access to the said changer 3 by e-mail or the like.

FIG. 28 shows an example of the contents of an e-mail received when the changer 3 selects ''Do not disclose new address this time, but receive inquiries from this inquirer hereafter'' (the hyperlink shown by the numeral 114 in FIG. 23) in the confirmation form 105 shown in FIG. 23. In this example, the changer 3 refuses an inquiry about the new address 24 from the

inquirer 5 but does not register this inquirer in the inquiry refusal list 18, and thereby a notice that the similar inquiries can be made hereafter is given (step S33). Moreover, when the changer 3 selects nothing  
5 within a predetermined period, an e-mail shown in FIG. 29 is transmitted, the inquiry is refused, and the processing is completed (steps S34 and S35).

Incidentally, the display screens in FIGS. 28, 29, 31, and 32 show examples in the case where the changer  
10 3 who discloses the new address is singular. When an inquiry is made about a plurality of changers 3 at the same time, a list of results of responses to the permission of disclosure of new addresses of the plurality of changers 3 may be displayed all at once by  
15 the same screens. Further, the display screens in FIGS. 28, 29, 31, and 32 are notice screens when a notice from the address inquiry system 1 is received by e-mail. Meanwhile, the inquirer 5 can confirm this notice through a Web page by being authenticated by the  
20 address inquiry system 1 and logging therein.

A notice of the inquiry result to the inquirer 5 is executed by the discloser 54, and the monitoring of the aforesaid predetermined period is executed by the inquiry process monitor 53. If the new address 24  
25 obtained as the result of the inquiry is a home page address, the new location displayer 86 operates to make the browser 80 display a home page of the new location



automatically.

According to the configuration explained above,  
the following effects can be obtained.

(1) In most of conventional services, the inquirer  
5 is informed about the new address of the changer 3  
unconditionally if the inquirer 5 inquires about the  
old address 23 and the said old address is registered.  
Namely, in such services, it is impossible to  
selectively inform the inquirers 5 about the new  
10 address 24 depending on the inquirers 5.

Contrary to this, according to the aforesaid  
embodiment, the changer 3 can freely set the address  
disclosing condition 17 of the new address 24 and judge  
whether to disclose the new address 24 after checking  
15 the profile of the inquirer 5, thereby producing an  
effect that flexible responses to meet the situation of  
the changer 3 can be made with regard to the disclosure  
of the new address 24.

(2) In conventional services, the changer 3 side  
20 cannot know when or to whom the new address 24 is  
disclosed.

Contrary to this, according to the aforesaid  
embodiment, the changer 3 can receive a confirmation  
form to confirm whether the new address 24 is disclosed  
25 to the inquirer 5, and the changer 3 can determine when  
and to whom the new address 24 is disclosed by  
controlling his or her response to the confirmation

form.

(3) Conventionally, to notify a third party of the change information 15 of a URL of a home page, it is necessary to notify him or her of a URL (the new address 24) of a new home page on the old home page. Therefore, a domain name of the old home page and a contract with an Internet service provider need to be maintained, which causes a problem that the cost thereof needs to be borne during the notification of the change information 15.

Contrary to this, according to the aforesaid embodiment, the address inquiry system 1 can provide an inquiry about the URL (the new address 24) of the new home page, so that a domain server of the old home page or the contract with the Internet service provider does not need to be maintained. Thus, to the changer 3, server administration becomes easier, and the cost of maintaining servers can be reduced.

(4) When the change information 15 about a telephone number or a mail address is given, there is a limit in terms of a period to the present service of a telephone office or a post office.

Contrary to this, according to the aforesaid embodiment, the new address 24 can be disclosed regardless of the service of the telephone office or the post office.

(5) In the case of mail service, the receiver

needs to inform a sender of mail delivered to the old address about the new address on another occasion by himself or herself as described above.

Contrary to this, according to the aforesaid  
5 embodiment, the system can respond to an inquiry about a new mail address (the new address 24) in place of the receiver of the mail, thereby eliminating such a trouble.

(6) Meanwhile, in transport by the majority of  
10 private companies, it is impracticable to make a forwarding request to all of transport companies, and moreover, some private companies do not accept such a request.

Contrary to this, if the address inquiry system 1  
15 is used, a private transporter can be used after the new address 24 of the changer 3 is known, which makes it possible to ensure the delivery of a load and the like by such transporter.

(7) Addresses sometimes cease to be used for some  
20 reason. Namely, the use of the addresses themselves is sometimes stopped without the telephone number being changed. In this case, since the conventional service handles only addresses of the same sort, some who know only the telephone number cannot know other addresses  
25 of the changer 3.

Contrary to this, according to this embodiment, by setting the disclosure rule 25, inquiries about the new

addresses 24 of different sorts can be made, for example, a new telephone number (the new address 24) is detected based on the e-mail address (the old address 23), whereby the aforesaid trouble is eliminated.

5           It should be mentioned that the present invention is not limited to the aforesaid embodiment, and various changes may be made therein without changing the spirit of the present invention.

10           For example, it is already described that processing can be executed by the same process as above also in the case of an inquiry about a new home page URL as the new address 24. The home page, however, aims at being opened to the public, and hence the permission of disclosure of a URL at a new location is  
15           often given unconditionally. In this case, it is imagined that it is troublesome to follow the same steps as that of the e-mail address, which is sometimes unbecoming for the purpose of the home page.

20           To cope with this, in the aforesaid special-purpose software, based on the detection of "An access destination is unknown" by the browser 80, the inquiry message maker 84 and the inquiry executor 85 may automatically make out an inquiry message and transmit it to the address inquiry system 1 without obtaining  
25           confirmation from the inquirer 5.

          If the changer searcher 49 finds the new address 24 (new location URL), the discloser 54 or the new

location displayer 86 may give a command to the inquirer terminal 6 to display a Web page concerned in the new address 24.

Such a configuration enables the automatic display  
5 of a new home page 116 at the new location in the inquirer terminal 6 based on the detection of "An access destination to a desired home page is unknown" by the browser 80 as shown in FIG. 30. In this case, it is preferable to display also a screen 117 for  
10 persuading the inquirer 5 to renew the access destination in order to call the attention of the inquirer 5. Further, it is more preferable to display the new home page 116 at the new location without displaying an error display screen of "An access  
15 destination is unknown" by the browser 80.

Furthermore, in the aforesaid embodiment, the confirmation form (the screen shown by the numeral 105 in FIG. 23) from the address inquiry system 1 to the changer 3 is sent only when the response pattern (2) is  
20 selected (step S23) as shown in step S27 in FIG. 22, but the present invention is not limited to this.

For example, even when the response pattern (1) or (3) is selected (step S21 or S26), it is possible to send the changer 3 this form as an general notice in  
25 which information such that about which address, from what sort of the inquirer 5, and on what sort of matter an address inquiry is received is described when the

inquiry about the new address 24 is received from the inquirer 5. Moreover, it is possible to include a message text to the changer in this notice.

5 In this case, however, it is preferable that only in the notice when the response pattern (2) is selected, the hyperlinks (the hyperlinks shown by the numeral 112 to 114 in Fig. 23) for confirming whether to disclosed the new address to the inquirer exist and that a response to the permission of disclosure of the new  
10 address is given with reference to the information about the inquirer 5 displayed in this notice.

Moreover, in the aforesaid embodiment, a registrant is explained with the changer 3 who has changed his or her own address from the old address 23  
15 to the new address 24 as an example, but the registrant in the present invention is not limited to the changer 3 like this. For example, the registrant may be one who registers his or her own e-mail address or the like only to disclose it to others (the inquirer 5).  
20 Furthermore, based on the old address 23 of the changer 3, the new address 24 thereof is searched and disclosed in the aforesaid embodiment, but the present invention is not limited to this. The new address 24 may be  
25 searched by using information except the old address 23, for example, some attribute information of the changer 3.

As explained above, when an inquiry about a new

address of a registrant is sent from an inquirer,  
various responses, with a high degree of freedom, can  
be made depending on the registrant's intention  
according to the present invention.

5           The embodiment explained above intends to clarify  
technical meaning of the present invention. Therefore,  
the present invention is not intended to be limited to  
the above concrete embodiment and to be interpreted in  
a narrow sense, and various changes can be made therein  
10 without departing from the spirit of the present  
invention and within the meaning of the claims.

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